

2. *Muscular Reactions in General Paralysis and Reflexes.*—The authors use the term reflex in a broad sense as comprising all motor reactions consecutive to an excitation. (1) The idio-muscular reflex is found in paresis. If a muscle, *i.e.*, the pectoral, be percussed we observe two phenomena, a fibrillary contraction and a contraction at the exact point struck. Normally the contraction of the muscle mass is much more general. These abnormal reactions are similar to those found in the dying or just dead. The contraction in mass is dependent upon the integrity of the central nervous system. The fibrillar contraction is a reaction of the muscle itself, spreading only through some of the fibers directly excited while the contraction into a small node at the point struck resembles the contraction of smooth muscle fiber. Paresis provides most of the conditions for the occurrence of these phenomena, and accordingly we see with the decay of the central nervous organs the muscular reactions become more and more primitive and rudimentary; (2) the tendon reflexes are usually exaggerated. This is due to the removal of cerebral inhibition. In the development of the individual it is seen that the reflexes gradually diminish and in direct ratio to the complexity of the center. Thus, the wrist reflexes, and face reflexes, associated with the centers for the highly differentiated movements of fingers and facial muscles, are little in evidence until cerebral control is removed by disease. So we find these reflexes are exaggerated. The author thinks the absence of the patellar reflex and presence of three others highly significant of the spinal form of paresis; (3) the Babinski sign indicates pyramidal involvement. So also does the "phenomena of Strümpell." This latter sign is brought out in a hemiplegic by asking him to flex the leg on the thigh on the paralyzed side. An associated elevation and inward rotation of the inner border of the other foot occurs. The "lip sign of Miénrich," *i.e.*, a contraction of the orbicularis when the upper lip is struck, is present in the new born, disappears in the adult, but reappears in paretics. (4) vaso-motor paresis is mentioned as frequent, as, of course, is also the Argyll-Robertson pupil. The reaction of the pupil to atropine and eserine is three times as long as normally; (5) these changes of reflexes are not only seen in paresis, but in all states, *i.e.*, toxic, exhaustive, in which cerebral inhibition is removed. Paresis is the most perfect type of these states. The author closes by summarizing his results in the following law: "The intensity and the duration of reflexes are in inverse relation to the functional complexity of the nervous system."

3. *Association Time.*—This article describes the technic of a method of taking reaction time, and contains little of special interest for abstraction.

WM. A. WHITE (Washington,)

AMERICAN JOURNAL OF INSANITY

(Vol. 60, 1903, No. 2.)

1. Extracts from Writings of W. GRIESINGER. Translated by F. R. SMITH.
2. Hydrocephalus Internus in an Adult. H. J. BERKELEY.
3. Pathology of Acute Delirium. H. A. TOMLINSON.
4. Recognition of Insane in Penal Institutions. F. W. ROBERTSON.
5. Fluctuation of Insanity in Connecticut. R. H. BURR.
6. Study of Non-Dementing Psychosis by Laboratory Methods. C. L. DANA.
7. Status Epilepticus. L. P. CLARK and T. P. PROUT.
8. Object to Be Attained by an Organization of Assistant Physicians. A. P. OHLMACHER.
9. Report of Observations Made in Clinic of J. Babinski. C. G. CHADDOCK.

1. *The Writings of Wilhelm Griesinger*.—This article—concluded from a former number—gives the views of Griesinger on German institutions for the insane, and the lines along which they should be further developed. It shows that this great alienist looked far ahead of his time, and deserves the title which the translator gives him, "A prophet of the newer psychiatry." The views expressed, however, cover ground now familiar to all, and do not need to be reproduced here.

2. *Hydrocephalus Internus in the Adult*.—J. Berkeley reports a careful autopsy in the case of a female epileptic, 44 years old, who showed marked internal hydrocephalus. While certain changes were present, the author found nothing which would account for the production of the hydrocephalus. He also gives a short account of another case in a middle-aged man.

3. *The Pathology of Acute Delirium*.—A clinical and pathological study of delirium, based on observations in 87 cases, divided as follows: Acute delirious mania 23 cases, alcoholic delirium 8 cases, uremic delirium 27 cases, narcotic delirium 2 cases, syphilis (in the acute stage) 2 cases, small-pox (convalescence) 1 case, typhoid fever (unrecognized) 8 cases, septic delirium 13 cases, lobar pneumonia 2 cases, puerperal delirium 1 case. The author gives the results of postmortem examination—both gross and microscopic—in four of the cases. The changes found in the brain were, in general, engorgement and dilatation of vessels, with hemorrhages—in one case covering the greater part of the convexity of the brain beneath the dura—thickening and round cell infiltration of the pia-arachnoid, dilatation of lymph spaces, and proliferation of vascular endothelium, degenerative changes of greater or less extent, affecting large numbers of nerve cells, and some increase of glia cells. In all the cases there were kidney changes, in one case a marked convolitional anomaly. In one case bacterial examination revealed colon bacillus in the pericardial fluid, in another staphylococci were grown from both pericardial and cerebro-spinal fluid. Considering that the changes found in the nerve elements were due in the main to the exhaustion from lack of nutrition, loss of sleep, and constant activity on the part of the patient, the author sought to reproduce the same conditions in a number of rats, by whirling them around in the wheel of a squirrel cage, for various periods, starving them, etc. Upon the examination of the brains of these animals, he found changes exactly similar in kind to those observed in the cases of acute delirium, and varying in degree with the extent of exhaustion produced. He concludes that the cell changes found, are only extreme exaggerations of those taking place during normal activity. These physiological changes are normally repaired during alternating periods of rest, while in cases in which there is no rest, and imperfect nutrition, exhaustion becomes extreme, and repair is no longer possible. The article is illustrated by a number of reproductions of photomicrographs.

4. *Insane in Penal Institutions*.—A plea for the recognition of the criminal insane, which the author thinks could be accomplished by (1) the establishment in each state of institutions for insane criminals, and defectives showing criminal tendencies; (2) the examination by competent alienists of those accused of crime, to assist the judge in the disposition of the case; (3) the appointment of a competent alienist on the staff of each penal institution, or, if this be impracticable, of a state alienist to visit each institution of this sort. A careful record of each prisoner showing mental idiosyncrasy should be required to be kept for the inspection of such officer.

5. *Fluctuation of Insanity in Connecticut*.—A study of 7,657 cases of insanity in the Connecticut Hospital for the Insane during a period of 32 years, from which the author draws the following conclusions: (1)

The ratio of the insane to the general population is much larger than usually estimated, but the increase in proportion to population is much smaller than is usually supposed; (2) the foreign-born element shows a much higher percentage than the native; (3) the cities show a much larger percentage than the counties, but in the latter insanity is increasing; (4) of nationalities, the Irish show the highest, the Germans the next, and the natives the lowest percentage of insanity.

6. *Study of a Non-Dementing Psychosis by Laboratory Methods.*—"Summary." "The history of a case of chronic manic depressive insanity. First attack, one of mild depression; second, of depression and katatonia; period of twelve years of paranoid condition; third attack, one of acute mania, stupor followed by chronic mania, which is present condition, having now lasted six years." A study of the psychical condition of this patient by Prof. Cattell, at three different intervals extending over three years shows practically no further mental impairment at the end of this time, the patient's condition remaining at a standstill. Studying the anatomical and psychological localization of the disorder, the author concludes that: The cortical language areas are not directly impaired. The sensory motor zone and perception zone for appreciation of form and contour are practically normal. The sensory zones of vision, hearing, smell and taste are normal, though appreciation of food and drink are rather automatic, and sexual appetite is gone. The association tracts by which language is coördinated in its responses are gone, as are those which modify motor acts to definite purposes. In voluntary mental activity there is play of ideas, but they cannot be directed or correlated. Anatomically there would seem to be disorder of the association tracts, though a definite localization the author does not attempt to make.

7. *Status Epilepticus* (Continued article).

8. *Organization of Assistant Physicians.*—A plea for an organization of the assistant physicians in the Ohio State Hospitals.

9. *Clinic of Babinski.*—A résumé of Babinski's observations on voltaic vertigo, and his discovery that in cases where the voltaic ear reaction was abnormal, and deafness and ear noises were present, the abnormal manifestations were removed, and hearing was improved by withdrawal, after lumbar puncture, of 10 to 15 c.c. of cerebro-spinal fluid. The author thinks that the use of lumbar puncture both for diagnosis of the cause of vertigo, and for treatment of chronic deafness, is likely to prove an important addition to our resources.

ALLEN (Trenton).

(Vol. 60, 1904, No. 3.)

1. Anatomical Facts and Clinical Varieties of Traumatic Insanity. A. MEYER.
2. Apparent Recovery in Case of Paranoia. R. DEWEY.
3. Notes on Malignant Growths in the Insane. J. R. KNAPP.
4. A Report of a Case of Myoclonus Epilepsy. I. H. NEFF.
5. The Present Status of Paranoia. W. McDONALD.
6. Korsakoff's Psychosis. Report of Cases. H. W. MILLER.
7. Paranoid Dementia. C. W. PAGE.

1. *Traumatic Insanity.*—At the start the author announces that in his treatment of the subject he limits himself to trauma affecting the brain, both the direct injury to this organ and the emotional effect being considered. An injury may have as its physical result direct focal or more or less diffuse destruction of nerve tissue, followed by reaction showing as its immediate effect edema, and as a later result, formation of scar tissue. It may also produce "diffuse commotions in which the psychic elements preponderate, including the remote reactive results of exaggeration of vasomotor and emotional responsiveness." The arrangement of

the cranial cavity tends to the production of the greatest effect at the point of impact or opposite it, also at places where unevenness of the base or the presence of the tentorium leads to focal contusions. For instance, in patients who strike their heads on falling in fits, at the tips of the temporal, and bases of the frontal lobes, and in the central grey matter of the third and fourth ventricles.

The swelling of the injured tissues best explains the rapid rise of intracranial pressure, and in a general way the author thinks a patient with extensive destruction of the skull has a better immediate chance to survive the injury. He next gives more or less detailed histories of 31 cases, with discussions. In 7 of these cases an autopsy was obtained, and in one he was able to inspect the brain at the time of a trephining operation. Into the details of these cases it is impossible to enter here. The author makes a general analysis as follows:

The question of the frequency of traumatic insanity is not easy to establish, as statistics of state hospitals are not as reliable as they should be. The series of cases presented represents the material of about 3,000 admissions during six years. The author thinks that some cases were probably not included, so that 1 per cent. is a safe estimate. Other American authors have found the percentage higher. Of his 31 cases he finds that in 23, mental symptoms followed a more or less profound trauma to the head. In 9 of these fracture of the base was very probable if not certain. There was fracture or lesion of the convexity in five, more or less severe general concussion in seven, pistol shot wound in the temple in one, and trauma from unknown cause (shown by a frontal scar) in one case. Of the remaining cases, three died before showing definite mental disease referable to the trauma, two were cases of tumor, and in three the effects of the accident were mainly psychic. Is there a relationship between special types of injury and the form of psychosis? Lesions of, or over, the convexity led to epileptic or epileptiform disorders in 3, probably in 4 cases. Diffuse concussions and basal fractures led (1) to initial delirium in 3 cases (as did also a pistol shot wound of the orbit); (2) to a paranoid development (delusional state), also very frequently (3) to intercurrent episodes of a more or less epileptiform character, spontaneous or excited by such causes as alcohol, grippe, etc. Where dementia resulted, it was due to epilepsy, alcoholism, or arteriosclerosis, or to early age and subsequent defective development. While we cannot speak of a special traumatic insanity, there are some characteristic traits. "The primary disorders, the 'protracted deliria' show beside partial disorientation usually variations between clearness and haziness of sensorium, a certain prominence of fabrications of dreamlike situations— . . . more or less coherent according to the sensorium, further, difficulty of ready remembrance and of calculation. Alcoholism seems to bring on epileptoid episodes, or at least mental states also seen (though not as frequently) in cases of non-traumatic epilepsy. The paranoiac forms are apt to have the difficulty in calculation, inaccuracy of memory and of appreciation of time, and at times a feeling of dizziness, with episodes of fabrication, etc., or at least a certain imperfection in the systematization." In the majority of the cases, other etiological factors seem to coincide with the trauma and the following questions suggest themselves: "Would the patient have developed the mental disorder without the injury? Does the mental disorder show any typical traits speaking for trauma? To what extent do the forms depend on difference of make up, and to what extent on differences of the form of damage?" In answering these questions the author thinks there cannot be too much reserve. We have no direct measure of the damage of a concussion. He suggests that in examining traumatic cases there are five directions in which clinical studies can

be pushed to greater precision and usefulness. They are: (1) By making an inventory of the patient's mental possibilities (Attempted by Rieger; time consuming, but a step towards a safe method); (2) by studying the vasomotor neurosis of Friedman; (3) by examination for the "explosive diathesis" of Kaplan; (4) by investigation of all degrees of haziness or dream states, and hysteriform or epileptoid absences; (5) by careful consideration of all etiological factors, as (a) insanity in the family, and its types, (b) constitutional peculiarities and predispositions, (c) alcoholism, syphilis, exposures and excesses, (d) extent of the injury with its immediate and after effects, and especially the extent of the mental shock, (e) influences found to aggravate the symptoms, or to elicit post-traumatic reactions, such as litigation and invalidism and its consequences.

Summarizing his experience concerning clinical distinctions, while he would discourage the hope for a strict classification, the author suggests the following as salient types: "(1) The direct post-traumatic deliria with the following subdivisions: (a) Preëminently febrile reactions; (b) the delirium nervosum of Dupuytren, not differing from the deliria after operations, injuries, etc.; (c) the delirium of slow solution of coma with or without alcoholic basis; (d) forms of protracted deliria usually with numerous fabulations, etc. (with or without alcoholic or senile basis).

2. The post-traumatic constitution: (a) Types with mere facilitation of the reaction to alcohol, grippe, etc.; (b) types with vasomotor-neurosis; (c) types with explosive diathesis; (d) types with hysteroid or epileptoid episodes, with or without convulsions (such as most reflex psychoses); (e) types of paranoiac development.

3. The traumatic defect conditions: (a) Primary defects allied to aphasia; (b) secondary deterioration in connection with epilepsy; (c) terminal deterioration due to progressive alterations of the primarily injured parts, with or without arteriosclerosis.

4. Psychoses in which trauma is merely a contributory factor: (a) General paralysis, with or without traumatic stigmata; (b) manic-depressive and other transitory psychoses, catatonic deterioration and paranoiac conditions, with or without traumatic stigmata.

5. Traumatic psychoses from injury not directly affecting the head."

The question of surgical intervention should always be considered if any localization of the irritating factor is possible.

The author's post-mortem findings were, in the recent cases, clots and bruising of the brain, with or without fracture; in the old cases, scar and membrane formation, localized losses of brain substance, and development of spicules or plates of bone. In case 5 (of gunshot wound through the orbit) a very careful study of secondary degenerations was made, by the Marchi method. The paper presents a careful and comprehensive study of the subject, and but scant justice can be done it in the space available here.

2. *Apparent Recovery in Paranoia*.—Description of the case of a man of 40 years of age, who developed apparently systematized delusions of persecution, together with some hypochondriacal ideas, and probably hallucinations of hearing and of smell, from all of which he recovered at the end of a year and a half. The author regards the case as one of paranoia, but in view of its course and outcome, some doubt as to the diagnosis seems permissible.

3. *Malignant Growths in the Insane*.—A study of cases dying from malignant growths in the Manhattan State Hospital East (Male Dept.) during the eight years ending in 1896, a total of 31 male patients. Including in the estimate both male and female departments, there was in every

III deaths one from malignant growth, the women being twice as frequently affected as the men. For the men alone the proportion was 1 case to 217 deaths, or 1 case of malignant growth to 626 patients under treatment. These figures the author finds are twice as great as those for the adult population at large, and four times those for the general population. Of his 31 cases 22 were of carcinoma, and 9 of sarcoma. Of the latter 5 were of sarcoma of the brain. A short detailed description follows. In the 5 cases of sarcoma of the brain, the insanity was of short duration (three and a half months to two and a quarter years), and was apparently due directly to the neoplasm. They were characterized in general by depression, suicidal tendency, delusions of suspicion, and stuporous states passing into dementia. The author thinks that cancer may be possibly in some way connected with loss of "inhibitory control" and changes in metabolism, hence its greater frequency in the insane, and suggests that this may possibly open up a new line of inquiry.

4. *Myoclonus Epilepsy*.—Preceded by sketches from the asylum records of three other cases which he thinks should also be placed in the group of "myoclonic disturbances in epilepsy," the author gives the following history: A man of twenty years of age, an imbecile with criminal tendencies, springing from a neurotic family, and showing stigmata of degeneration, at the age of fourteen years, after the ingestion of about a pint of whiskey, had an attack of acute gastritis, and vomited persistently for 72 hours. Immediately after this there was an attack of "clonic spasms" in the legs, lasting two days. He continued to drink, and three months later had his first typical epileptic grand mal attack. During the first year after this, the myoclonic spasms occurred about once a month, the epileptic fits about once in six weeks. His habits remained bad, both myoclonic attacks and fits became more frequent and the former had spread to arms, back and face, until at the time of his admission he was free from spasm only a few days in the week. Upon examination the author found marked disorder of equilibration and gait. Owing to the violence of the spasms in the leg muscles the patient was frequently thrown to the floor. The muscles of the face, neck, arm and abdomen were also involved, and speech was at times jerky, but the laryngeal muscles did not seem to be affected. The contractions were short and sharp, but not symmetrical. During fifteen months he had 25 grand mal attacks, and frequent myoclonus spasms, occurring entirely independently. The condition persists, but the frequency of the attacks has diminished under bromides.

5. *Paranoia*.—The author takes up Kræpelin's criteria of paranoia, and subjects them to analysis. The condition with which paranoia is most likely to be confounded is the paranoid form of dementia præcox. He lays special stress upon the importance of getting a complete history of the patient's whole life, if possible, and shows how easily the personal ideas and preconceived notions of the examiner may lead him to fill in certain gaps, and to decide that systematized delusions are present, when such is not the case. Summing up he comes to the following conclusions: (1) There are patients with paranoid characteristics, who, because of gross weakmindedness, and catatonic symptoms, are easily recognized as subjects of dementia præcox; (2) others less weakminded have never shown catatonia, but may be classed as precocious dementers on account of: (a) More or less acute onset not of the type called "shifting of the standpoint"; (b) consciousness at some time or other has been clouded or disturbed as an essential part of the psychosis, and not on account of delusional or other excitement; (c) prominence of hallucinations; (d) delusions not really systematized; (e) delusions not fixed; (f) gross incoherence of thought has been evident either in speaking or in writing;

(g) analysis of conduct and behaviour discovers a degree of mental impairment inconsistent with paranoia; (3) "There is a class of patients in which paranoid delusions occur in the natural course of development and because of defective organization." Original paranoiacs, or paranoid high grade imbeciles; (4) alcoholic insanity may take a paranoid form; (5) paranoid symptoms occur in senile dementia, general paresis, manic-depressive insanity and melancholia, but the other characteristics of these psychoses should make the diagnosis clear; (6) a study of his own patients and of the classical cases of literature does not show a case which he thinks could not with greater appropriateness be classed under one of the above heads than be called paranoia.

6. *Korsakoff's Psychosis*.—After reviewing the history, symptoms and pathology of this disease the author describes in detail four cases of whose history the following is a summary: *Case 1*. Female, 51 years old, non-alcoholic. Immediately after an attack of typhoid fever, symptoms of multiple neuritis, together with insomnia and delirium, with hallucinations and illusions, appeared. Her memory for recent events became faulty, and conception of time and place was much confused. Upon admission to the hospital she was bedridden and there was atrophy of the leg and arm muscles, with altered electrical reactions. The troubles of memory persisted, and she was entirely disoriented and given to fabrication. No improvement. Death about six and a half months after the beginning of the attack, from pulmonary embolism and sepsis from a pelvic abscess. Examination showed, neuritis of a number of nerves, changed in the cells of the anterior horns, and degeneration in the posterior columns of the cord (by Marchi). *Case 2*. Male, 51 years old, alcoholic. After an attack of delirium tremens, paresis and peculiar sensations in the legs, followed by loss of memory, disorientation, and tendency to fabricate. Upon admission to the hospital no signs of the multiple neuritis remained. He has improved in his general condition, but memory remains defective. *Case 3*. Male, 37 years old, alcoholic. Never had delirium tremens, but history as to the beginning of the psychosis is defective. Undoubted symptoms of neuritis in the legs, with slight weakness in the arms, defect of memory, disorientation, and pseudo-remembrances. Some improvement in orientation, but he remains in the hospital, with memory defective for recents and for time. *Case 4*. Male, 40 years old, alcoholic, had delirium tremens. No history as to the beginning of his attack. No definite symptoms of neuritis, but he tired easily and could not walk any distance. Loss of memory for recent events, disorientation and fabrication. Remains in the hospital improved in physical condition, but mentally unchanged.

7. *Paranoid Dementia*.—By this term the author understands the paranoid form of dementia præcox. This paper is interesting as showing the great change in the conception of some of the insanities, which the present dominating influence of Kræpelin has brought about, at any rate in some quarters. From the adoption of Kræpelin's classification in 1898, to July, 1901, there were admitted to the Connecticut Hospital for the Insane 1,210 cases of insanity. Of these 56 cases were diagnosed as paranoid dementia. From his study of these the author recognizes two groups of cases, both presenting delusions of grandeur and of persecution unsystematized and frequently absurd, with auditory hallucinations, and mental enfeeblement progressing steadily to dementia. The second form differs from the first chiefly in the slower progress of the disease, complete dementia not being reached for years. He thinks that with proper investigation of all the features of the case, the diagnosis is generally possible at the start. Among the 56 cases considered 10 were readmissions. The original diagnoses in these cases (made prior to 1898) furnish

the point of the paper. They were as follows: Acute mania 3 cases, acute melancholia 1 case, chronic mania 1 case, chronic melancholia 2 cases, puerperal mania 1 case, paranoia 2 cases.

ALLEN (Trenton).

MISCELLANY

ARTERIOSCLEROSIS AND THE OPTIC NERVE. Charles S. Bull (Medical News, Oct. 31, 1903).

The author calls attention to the influence of arterial degeneration upon the vision. There are three types of arteriosclerosis: The cardiac with early symptoms of heart insufficiency; the renal type in which kidneys early become prominent, and the diffuse type in which rupture of the arteries of the brain, is apt to be an early symptom. In the renal type, changes in the retina are seen early, and in the diffuse type, the eye symptoms are apt to be of help in the diagnosis of the condition. In degenerative disease, as tabes, early eye symptoms are often warnings of the process long before any other symptoms occur. When hardening of the arteries occurs, it is not unusual to find central defects of vision due to the fact that the hard artery presses upon the optic nerve, causing loss of function in its fibers. Retro bulbar degeneration may even take place in these cases. The only satisfactory treatment is to improve the general condition, and as far as possible prevent the progress of the arterial degeneration.

W. B. NOYES.

ACUTE NON-SUPPURATIVE ENCEPHALITIS. Harlow Nooks (Medical News, Aug. 9, 1903).

Cases of acute non-suppurative encephalitis are rare, and only exceptionally recognized. A considerable number of the cases recover and are thought to be hysteria. The etiology should include not only bacterial, but other toxins and also traumatism. The lesions of acute non-suppurative cerebritis are varied. (1) Cerebrospinal meningitis, probably secondary to cerebritis and of a "cellular type." (2) General non-septic cerebritis affecting all parts of the cerebrum, but most marked in the cortex and particularly so in that of the motor areas. The disease is characterized pathologically by perivascular infiltration, dilatation of lymph spaces, and by areas of neuroglial proteferation. (3) Degeneration of many of the ganglion cells of the cortex. (4) Degeneration of many of the fibers arising from the large pyramidal cells of the cortex. (5) Diffuse degeneration affecting many of the fibers passing through both internal capsules. (6) Similar changes in the cerebellum. (7) Degeneration of many of the tracts of the pons and medulla. (8) Degeneration of the chief descending tracts of the spinal cord. (9) Slight changes of the cytoplasm of the ganglion cells of the anterior horns of the spinal cord, probably secondary. The symptoms caused these conditions in the case reported had been coma, stertorous respiration, no muscular rigidity, absent patella reflexes, the unconsciousness persisting for three weeks. Autopsy showed no gross organic lesions.

W. B. NOYES.